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EPA

This fact sheet will give you...

- *A brief history and background.*
- *A summary of the site risks and the removal alternatives considered.*
- *Information on how the public can participate.*

Public Comment Period

U.S. EPA will accept written comments on its recommended cleanup plan during a 30-day public comment period:

Date: Tuesday November 10, 1998, until Thursday December 10, 1998.

Written comments can be sent to Janet Pope, Community Involvement Coordinator, at the address listed in this fact sheet.

Public Meeting

U.S. EPA will hold a meeting to explain the results of the investigation and discuss the preferred alternative presented in the EE/CA. Written and oral comments will be accepted concerning the alternatives considered.

Date: **November 17, 1998**
Time: **7:00 p.m.**
Place: **The North Suburban District Public Library**
5540 Elevator Road
Roscoe, Illinois

United States Environmental Protection Agency
Office of Public Affairs
77 West Jackson Blvd.
Chicago, Illinois 60604
Illinois Indiana
Michigan Minnesota
Wisconsin Ohio

U.S. EPA Evaluates Removal Options for the Evergreen Manor Groundwater Contamination Site

Winnebago County, Illinois **November 1998**

Introduction

The United States Environmental Protection Agency (U.S. EPA) has completed a document called an Engineering Evaluation/Cost Analysis (EE/CA) for the Evergreen Manor Groundwater Contamination Site. This site encompasses an area of groundwater contamination located within the Evergreen Manor Subdivision, Hononegah Heights Subdivision, Olde Farm Subdivision and possibly the Tresemer Subdivision, approximately 1.5 miles northwest of the Village of Roscoe in Winnebago County, Illinois (Evergreen Manor site).

Groundwater contamination has prompted the Illinois Environmental Protection Agency (IEPA), the Illinois Department of Public Health (IDPH), and U.S. EPA to conduct investigations of the Evergreen Manor site. Some residential well samples from the Evergreen Manor site have been found to contain trichloroethene (TCE) and/or tetrachloroethene (PCE) in excess of the maximum contaminant level (MCL - the maximum allowable concentration of a substance in a public drinking water supply) standard of 5 parts per billion (ppb) set forth by the U.S. EPA Office of Water, under the drinking water regulations and health advisories.

The EE/CA for the Evergreen Manor site, prepared by the U.S. EPA Region 5, evaluates three alternative methods to abate the threat to human health from ingestion of contaminated drinking water. The alternatives evaluated are: 1) construction of a water main extension project to bring potable water from the North Park Public Water District to the individual residences threatened by contaminated water; 2) point of entry residential treatment involving the use of carbon filters at the outlet of the well; and 3) point of use residential treatment involving the use of carbon filters at the kitchen faucet.

Site Description and History

The Evergreen Manor Groundwater Contamination Site (Site) is located approximately 1.5 miles northwest of Roscoe, Illinois. The Site is currently defined by the areal extent of groundwater contamination in the region. The investigations conducted at the Site have identified a plume of contaminated groundwater extending from an area on Rockton Road just east of Highway 251, to Tresemer, Olde Farm, Evergreen Manor, and the Hononegah Heights Subdivisions.

According to IDPH personnel, contamination at the site was initially discovered in November of 1990, when a lending institution required a local homeowner to have the home's private water supply analyzed. The analysis of the well water revealed elevated levels of volatile organic compounds. The IDPH, together with U.S. EPA, then began sampling other residential wells in the area and discovered a narrow plume of contamination extending from Hononegah Heights subdivision south-southwest into the Evergreen Manor subdivision. Sampling results found TCE, PCE, 1,1-dichloroethene, cis-1,2-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, and 1,1,2-trichloroethane in the groundwater. Concentrations ranged from less than 1 ppb to over 60 ppb. In some cases MCLs were exceeded. These concentrations, however, were below U.S. EPA Emergency Removal Action Levels for drinking water supplies.

In 1992, IEPA conducted a CERCLA Screening Site Inspection of the site. Samples were collected in the area to the northeast of the identified plume in order to gain information that might lead to the identification of possible sources of the groundwater contamination. The data revealed that the plume extends beyond Hononegah Heights Subdivision to the northeast toward Rockton Road.

In November 1993, IEPA conducted an Expanded Site Inspection at which time a total of 49 private well samples were collected from the Evergreen Manor, Olde Farm, and Hononegah Heights subdivisions. TCE was found at concentrations ranging from less than 10 ppb to 40 ppb. Between December of 1990 and March 1994, IEPA and IDPH sampled the drinking water wells at 267 locations in and around the Evergreen Manor site. The large majority of these locations were homes within the four previously mentioned subdivisions. This sampling resulted in the identification of 203 locations where the drinking water was impacted by contaminants, including 108 locations where the drinking water was contaminated in excess of MCLs.

Since 1990, the IDPH has been collecting a limited number of residential well samples on an annual basis. Contaminant concentrations detected above MCLs include TCE and PCE. Concentrations of TCE within the plume area have ranged from a high of 75 ppb in 1990 to a high of 22 ppb in 1996. Concentrations of PCE within the plume area have ranged from a high of 2.7 ppb in 1991 to a high of 5.1 ppb in 1996. In general, TCE concentrations appear to be decreasing over time while PCE concentrations are increasing.

U.S. EPA sampled 12 residential wells on May 22, 1998. Six wells had TCE concentrations above the MCL and three wells had PCE concentrations above the MCL.

On July 28, 1998, U.S. EPA announced that the Evergreen Manor Site was proposed for the

Superfund National Priorities List of hazardous waste sites. Sites on the list are eligible for long-term cleanup under the Superfund program.

Site Risks / Need for Action

A preliminary risk assessment has identified the ingestion of TCE, PCE and 1,1-dichloroethene through drinking water from affected private wells as the primary exposure pathway of concern.

TCE and PCE concentrations in residential drinking water wells at the Evergreen Manor site exceed MCLs. In 1974, Congress passed the Safe Drinking Water Act which requires U.S. EPA to determine safe levels at which chemicals in drinking water will not cause health problems. These non-enforceable levels, based solely on possible health risks and exposure, are called Maximum Contaminant Level Goals (MCLG). U.S. EPA set the MCLG for TCE and PCE at zero, believing this level of protection necessary to eliminate the potential health problems associated with these constituents.

Based on this MCLG, U.S. EPA has set an enforceable Maximum Contaminant Level (MCL). MCLs are set as close to the MCLGs as possible, considering the ability of public water systems to detect and remove contaminants using suitable treatment technologies. The MCLs for TCE and PCE have been set at 5 ppb because U.S. EPA believes, given present technology and resources, this is the lowest level to which water systems can reasonably be required to remove these contaminants should they occur in drinking water. These drinking water standards and the regulations for ensuring that such standards are met, are called National Primary Drinking Water Regulations. All public water supplies must abide by these regulations.

Summary of Removal Action Alternatives for the Site

The Evergreen Manor site EE/CA report evaluated removal action objectives and removal action alternatives. Removal actions are usually short-term response actions taken to abate or mitigate imminent substantial threats to human health and the environment. As a result of the short-term nature of these actions, CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), sets $2 million and 12 month limits on Trust Fund-financed removal actions. The objective of a removal action at the Evergreen Manor site will be to address the primary concern identified at the site which is exposure to TCE, PCE and 1,1-dichloroethene. Secondary concerns involve the potential migration of the contaminant plume and environmental effects. U.S. EPA intends to investigate these secondary concerns during the Remedial Investigation/Feasibility Study (RI/FS) phase of the more long term remedial process to be conducted at a later date.

Three alternatives have been evaluated - a water supply alternative and two treatment alternatives. The water supply alternative would involve the construction of a water main extension project to bring water from the North Park Public Water District to residences threatened by contaminated water. The two treatment alternative options evaluated would involve application of carbon filters at the outlet of each contaminated well (point-of-entry) and application of carbon filters at the kitchen faucet (point-of-use) of each residence threatened by contaminated water. All three

options would abate threats to human health. Each alternative was evaluated for its effectiveness, implementability and cost. A comparison of these alternatives is presented in the Alternatives Table (below). However, more detailed information and cost breakdowns can be found in the EE/CA report.

EVALUATING ALTERNATIVES

U.S. EPA uses three criteria to compare the alternatives during the EE/CA:

1. ***Effectiveness** - Refers to the ability of an alternative to meet the objectives within the scope of the removal action, especially in regard to protection of public health and the environment.*
2. ***Implementability** - Considers the technical and administrative feasibility of implementing the alternative, such as the availability of goods and services.*
3. ***Cost** - Refers to estimated capital, operation and maintenance costs, as well as present-worth costs. Present worth cost is an alternatives total cost over time in terms of today's dollars.*

Next Steps

The U.S. EPA will accept written comments on the EE/CA during a public comment period from Tuesday October 27, 1998, until Friday November 27, 1998. After the public comment period, the U.S. EPA will further evaluate the alternatives in light of public input. The Agency will then prepare a brief "Action Memorandum" to document its decision and respond to public comments. U.S. EPA will then secure the necessary funding and implement the selected alternative.

Your Opinion Counts!
Public Comment Invited

ALTERNATIVES TABLE

COMPARATIVE ANALYSIS OF REMOVAL ACTION ALTERNATIVES
EVERGREEN MANOR GROUNDWATER CONTAMINATION SITE

Criteria	North Park Public Water District	Residential Treatment Point-of-Entry	Residential Treatment Point-of-Use
Effectiveness, protection of health and environment	Adequate protection to human health and will reduce, control/eliminate risks. Will not abate groundwater contamination.	Adequate protection to human health and will reduce risk. Will abate actual groundwater contamination at very slow pace.	Adequate protection to human health and will reduce risk. Will abate actual groundwater contamination at very slow pace.
ARAR and other compliance	Adequately abates actual and potential exposure. Can supply clean water source and meet all applicable ARARs.	Adequately abates actual and potential exposure. Can meet all applicable ARARs.	Adequately abates actual and potential exposure from ingestion of contaminated wate Can meet all applicable ARARs
Long-term effectiveness and permanence	Will provide long-term effectiveness and permanence.	Long-term effectiveness and permanence is questionable.	Long-term effectiveness and permanence is questionable.
Reduction of toxicity, mobility, and volume	No reduction of toxicity, mobility, and volume.	Provides limited reduction of toxicity, mobility, and volume.	Provides limited reduction of toxicity, mobility, and volume.

Short-term effectiveness	Short-term effectiveness is questionable. May take up to 9 months to implement once funding is secured.	Will provide short-term effectiveness	Will provide short-term effectiveness
Implementability			
Technical feasibility	Low degree of difficulty in construction and operation.	Low degree of difficulty in construction and operation of treatment units.	Low degree of difficulty in construction and operation of treatment units.
Costs			
Direct Capital	$1,700,000	$199,800	$70,200
Indirect Capital	$75,600	$48,200	$26,600
Well Abandonment	$126,800	N/A	N/A
Long-term operation and maintenance	None	$165,964	$57,223

N/A - Not Applicable

Glossary

Action Memorandum - Provides a concise, written record of the decision to select an appropriate removal action. As the primary decision document, it substantiates the need for a removal action, identifies the proposed action, and explains the rationale for the removal action.

Capital Costs - Represent the amount of money required to conduct the initial action.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - More commonly know as Superfund, a Federal law passed in 1980 and revised in 1986 by the Superfund Amendments and Reauthorization Act (SARA). CERCLA created a special tax that goes into a trust fund, commonly know as the "Superfund," to investigate and clean up abandoned or uncontrolled hazardous waste sites.

Emergency - Those releases or threats of releases requiring initiation of on-site activity within hours of the lead agency's determination that a removal action is appropriate.

Groundwater - Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Net Present Value - Represents the total cost of the cleanup calculated in current 1998 dollars and includes the cost of the initial action (capital costs) and operation and maintenance costs.

Operation and Maintenance (O&M) Costs - Represent the amount of money required each year to maintain the site and conduct the necessary monitoring.

Parts per Billion (ppb) - A unit commonly used to express low concentrations of contaminants. For example, one ounce of TCE in one billion ounces of water is one ppb. If one drop of TCE is mixed in a competition-size swimming pool, the water will contain about one ppb of TCE.

Remedial Response - A long-term action that stops or substantially reduces a release or threatened release of hazardous substances.

Removal Action - An immediate action taken over the short-term to address a release or threatened release of hazardous substances.

Response Action - A CERCLA-authorized action at a Superfund site involving either short-term removal action or a long-term remedial response.

Mailing List Additions and Corrections

If you did not receive this fact sheet in the mail, you are not on U.S. EPA's mailing list for the **Evergreen Manor Groundwater Contamination Site**. If you would like to add your name to the list, please fill out this form and mail it to:

Janet Pope
Community Involvement Coordinator
Office of Public Affairs
U.S. EPA (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604

Name _____
Address _____
City _____ State _____
Zip Code _____

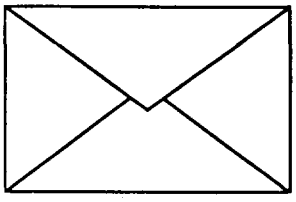
_____ **Please take my name off the U.S. EPA mailing list.**

Use This Space to Write Your Comments

Public Comment Sheet

Your input on the recommended cleanup plan for the Evergreen Manor Groundwater Contamination site is important to U.S. EPA. Comments provided by the public are valuable in helping U.S. EPA select a final remedy for the site.

You may use the space below to write your comments, then fold and mail or fax your comments to (312) 353-1155. Comments must be postmarked on or before November 28, 1998. If you have questions, please contact Janet Pope at (312) 353-0628 or toll free at 1-800-621-8431. Comments may also be sent via E-mail to the following address: **pope.janet@epamail.epa.gov**



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Chicago, IL 60604

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Evergreen Manor Groundwater Contamination Site
Public Comment Sheet

Fold on dashed lines, tape, stamp, and mail

Name _____
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